

AMENDMENT AND REPLY

Applicants: Ronald A. MODESTO; Robert WOJCZAK; Scott KRUPP;
Yvonne LUZNEY and Daniel LAPPI

Application No. 09/652,197

Examiner: Tung S. LAU

Page 2 of 10

Sub B1
A1

1 1. (Amended) A part measurement system comprising:
2 a press machine including a lower die coupled to an upper die, wherein the
3 lower die includes a top surface supporting a strip of material to be formed into a part
4 after a stripper plate coupled to the upper die contacts the strip of material;
5 a part measurement sensor located in the lower die, wherein the sensor
6 measures a critical dimension of the part while the part is in the lower die;
7 a part forming rail coupled to the lower die, wherein the forming rail and
8 the upper die form the critical dimension of the part; and
9 a press controller coupled to the press machine and the sensor, wherein the
10 controller processes a measurement signal from the part measurement sensor of the
11 critical dimension of the part, compares the measurement signal to a predetermined
12 threshold value, and generates a command signal to the press machine to adjust the
13 forming rail based on the measurement signal;
14 wherein the forming rail is coupled to a servo and the press controller
15 adjusts the servo based on the measurement from the sensor of the critical dimension of
16 the part and further wherein the upper die includes a knocker that contacts the forming
17 rail to form the critical dimension of the part.

Sub B2
A2
Cont.

1 11. (Amended) A part measurement system comprising:
2 a press machine including a lower die coupled to an upper die, wherein the
3 lower die includes a top surface supporting a strip of material to be formed into a part
4 after a stripper plate coupled to the upper die contacts the strip of material;
5 a part measurement sensor located in the lower die, wherein the sensor
6 measures a critical dimension of the part;
7 a part forming rail coupled to the lower die, wherein the forming rail and
8 the upper die form the critical dimension of the part; and
9 a press controller coupled to the press machine and the sensor, wherein the

AMENDMENT AND REPLY

Applicants: Ronald A. MODESTO; Robert WOJCZAK; Scott KRUPP;
Yvonne LUZNEY and Daniel LAPPI

Application No. 09/652,197

Examiner: Tung S. LAU

Page 3 of 10

Sub 32
Ad
End

10 controller processes a measurement signal from the part measurement sensor of the
11 critical dimension of the part, compares the measurement signal to a predetermined
12 threshold value, and generates a command signal to the press machine to adjust the
13 forming rail based on the measurement signal;
14 wherein the forming rail is coupled to a servo and the press controller
15 adjusts the servo based on the measurement from the sensor of the critical dimension of
16 the part and further wherein the upper die includes a knocker that contacts the forming
17 rail to form the critical dimension of the part.

Sub 32
Ad
C 3
CMT.

1 22. (Amended) A method of measuring a critical dimension of a part in a
2 press machine, the method including the steps of:
3 feeding a strip of material through the press machine, wherein the machine
4 includes a lower die coupled to an upper die and the lower die includes a top surface
5 supporting the strip of material;
6 forming the strip of material into the part, wherein a stripper plate coupled
7 to the upper die contacts the strip of material and the upper die punches the strip of
8 material;
9 measuring the critical dimension of the part with a part measurement
10 sensor located in the lower die;
11 processing a measurement signal from the part measurement sensor of the
12 critical dimension of the part, wherein a press controller compares the measurement
13 signal to a predetermined threshold value, and generates a command signal to the press
14 machine; and
15 adjusting a forming rail coupled to the lower die based on the command
16 signal from the press controller;
17 wherein the forming rail is coupled to a servo and the press controller
18 adjusts the servo based on the measurement from the sensor of the critical dimension of